

3.6.5. Miscellaneous Distresses	101
3.6.6. Course Summary.....	101
3.6.7. LTPP Asphalt Concrete Survey Summary	103
3.7. LTPP Portland Cement Concrete Survey	104
3.7.1. Cracking.....	104
3.7.2. Joint Deficiencies.....	105
3.7.3. Surface Defects	106
3.7.4. Miscellaneous Distresses	106
3.7.5. Course Summary.....	107
3.8. Survey Reanalysis	109
3.8.1. Motivation.....	109
3.8.2. Processing	110
3.8.3. NCDOT Survey	112
3.8.4. LTPP Survey.....	119
3.9. Summary	128
CHAPTER 4 Bridges.....	130
4.1. Introduction.....	130
4.2. Perspectives on Automated Bridge Survey.....	132
4.2.1. Bridge Management: A National Perspective.....	132
4.2.2. Long-Term Bridge Performance Program.....	132
4.2.3. The Israeli Bridge Management System.....	132
4.2.4. Bridge Health Monitoring.....	133
4.2.5. Advanced Technologies in Foundation Investigations	133
4.2.6. Bridge Height Clearance Using Terrestrial LIDAR in Motion	133
4.2.7. Live Fatigue Crack Data with the Electrochemical Fatigue Sensor (EFS).....	134
4.3. Data Collection	135
4.4. Results.....	138
4.5. Summary	144
CHAPTER 5 Geotechnical Features.....	145
5.1. Introduction.....	145
5.2. Geotechnical Asset Management (GAM).....	146
5.3. Data Collection	147
5.4. Unknown Foundation.....	147
5.4.1. Ground Penetrating Radar (GPR).....	149
5.4.2. Dispersive Wave Method.....	149
5.4.3. Pulse-Echo	149
5.4.4. Borehole Seismic methods.....	150
5.4.5. Summary	151
5.5. Corrosion of Metal Strips.....	151
5.5.1. Backfill material.....	152
5.5.2. Reinforcing material	153
5.5.3. Corrosion Detection.....	154
5.5.4. Summary	155
5.6. Retaining Walls.....	155
5.6.1. Wall Data Collection.....	155
5.6.2. Asset Management of Walls	157